

What is claimed is:

1. A communication method performed by a WWAN network system for a mobile terminal with a WWAN address in the WWAN to handover between the WWAN and a WLAN, comprising steps of:

5 (a) receiving a registration report sent by the mobile terminal when it enters the WLAN, wherein the registration report at least contains a WLAN address that the mobile terminal acquires when entering the WLAN;
(b) establishing mapping relationship between the WWAN address and the WLAN address of the mobile terminal.

10 2. The method as claim 1, further comprising steps of:

(c) receiving the data information to be sent to said mobile terminal from a source address;
(d) encapsulating said WLAN address into the data information to be sent to said mobile terminal, according to the mapping relationship between said 15 WWAN address and said WLAN address;
(e) sending the data information containing said WLAN address to said mobile terminal via said WLAN.

3. The method as claim 1 or 2, further comprising steps of:

(f) receiving the data information containing said WLAN address sent by 20 said mobile terminal to a destination address via said WLAN;
(g) unpacking the data information containing said WLAN address and sending the unpacked data information to the destination address.

4. The method as claim 3, further comprising steps of:

receiving a report for canceling registration sent by said mobile 25 terminal when it leaves said WLAN;
deleting the mapping relationship between said WWAN address and said WLAN address of said mobile terminal in the network system according to said report for canceling registration.

5. The method as claim 3, further comprising steps of:

receiving a registration report sent by said mobile terminal when it enters another WLAN, wherein the registration report at least contains another WLAN address said mobile terminal acquires when it enters the another WLAN;

5 updating the mapping relationship between said WWAN address and said WLAN address of said mobile terminal to the mapping relationship between said WWAN address and the another WLAN address according to said registration report.

10 6. The method as claim 4, wherein said registration report and said report for canceling registration can be transferred to the network system via one of WWAN link and WLAN link.

7. A communication method performed by a mobile terminal, for the mobile terminal to handover between a WWAN and a WLAN, comprising steps of:

(a) acquiring a WLAN address when entering the WLAN;

15 (b) sending a registration report to the WWAN network system, wherein the registration report at least contains the WLAN address.

8. The method as claim 7, further comprising steps of:

20 (c) sending a report for canceling registration to said WWAN network system so as to notify said WWAN network system that said WLAN address of the mobile terminal is invalid when the mobile terminal leaves said WLAN;

9. The method as claim 8, wherein said registration report and said report for canceling registration can be transferred to said network system via one of WWAN link and WLAN link.

10. The method as claim 9, further comprising steps of:

25 (d) receiving the data information containing said WLAN address transferred via said WWAN network system from a source address, wherein said WLAN address is encapsulated in the data information by said WWAN network system;

(e) unpacking the received data information so as to get the data information from the source address.

11. The method as claim 10, further comprising steps of:

(f) encapsulating said WLAN address into the data information to be sent to a destination address;

5 (g) sending the data information containing said WLAN address to said WWAN network system, so as to send the data information unpacked by said WWAN network system to the destination address.

12. A WWAN network system ,which enables a mobile terminal with a WWAN address in the WWAN to handover between the WWAN and a WLAN, comprising:

10 a receiving unit, for receiving a registration report from the mobile terminal when it enters the WLAN, wherein the registration report at least contains a WLAN address that the mobile terminal acquires when it enters the WLAN;

15 an establishing unit, for establishing mapping relationship between the WWAN address and the WLAN address of the mobile terminal according to the registration report.

13. The WWAN network system as claim 12, further comprising:

20 an encapsulating unit, for encapsulating said WLAN address into the data information to be sent to said mobile terminal according to the mapping relationship between said WWAN address and said WLAN address when receiving the data information from a source address to be sent to said mobile terminal;

25 a sending unit, for sending the data information containing said WLAN address to said mobile terminal via said WLAN.

14. The WWAN network system as claim 12 or 13, further comprising:

a unpacking unit, for when receiving the data information containing said WLAN address sent to a destination address by said mobile terminal

via said WLAN, unpacking the data information containing said WLAN address and sending the unpacked data information to the destination address.

15. The WWAN network system as claim 14, further comprising:

5 a deleting unit, for when receiving a report for canceling registration sent by said mobile terminal when it leaves said WLAN, deleting the mapping relationship between said WWAN address and said WLAN address of said mobile terminal in the network system according to the report for canceling registration.

10 16. The WWAN network system as claim 15, further comprising:

an updating unit, for when receiving a registration report sent by said mobile terminal as it enters another WLAN, updating the mapping relationship between said WWAN address and said WLAN address of said mobile terminal to the mapping relationship between said WWAN address and the another WLAN address according to the registration report, wherein the registration report at least contains the another WLAN address that said mobile terminal acquires when it enters the another WLAN.

15 17. A mobile terminal with a WWAN address in a WWAN, capable of handover between the WWAN and a WLAN, comprising:

20 a receiving unit, for receiving a WLAN address when the mobile terminal enters the WLAN;

 a sending unit, for sending a registration report to the WWAN network system, wherein the registration report at least contains the WLAN address.

25 18. The mobile terminal as claim 17, wherein:

 said sending unit sends a report for canceling registration to said WWAN network system to notify said WWAN network system that said WLAN address of the mobile terminal is invalid when the mobile terminal leaves said WLAN.

19. The mobile terminal as claim 18, wherein:

said receiving unit receives the data information containing said WLAN address transferred via said WWAN network system from a source address, wherein said WLAN address is encapsulated in the data information by said WWAN network system;

5 a unpacking unit unpacks the received data information to get the data information from the source address.

20. The mobile terminal as claim 19, further comprising:

an encapsulating unit, for encapsulating said WLAN address into the data information to be sent to a destination address;

10 said sending unit sends the data information containing said WLAN address to said WWAN network system, so as to send the data information unpacked by said WWAN network system to the destination address.